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(54) DOWNLOADING DEVICE AND DOWNLOADING METHOD

(57)Abstract:
PROBLEM TO BE SOLVED: To prevent software from being copied illegally.
SOLUTION: The software is stored in a first medium 41. A key and conditions for permitting the use of the software in the medium 41 are stored in a second medium 42, in such a manner that they cannot be copied.

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CLAIMS

[Claim(s)]

[Claim 1] It is download equipment [made / the data grant a permission in use of the above-mentioned information archive medium / when the above-mentioned information acceptance means has a write-in means against control media and the above-mentioned information downloads to the above-mentioned information archive medium through the above-mentioned information acceptance means / were

download equipment which downloads the information currently prepared for an information offer means to the information archive medium set to an information acceptance means, and / write in to the above-mentioned control media by the above-mentioned write-in means].

[Claim 2] The download approach which was the download approach which downloads the information currently prepared for the information offer means to the information archive medium set to the information acceptance means, and wrote the data which permit use of the above-mentioned information archive medium in the above-mentioned control media with a write-in predetermined means when downloading the above-mentioned information to the above-mentioned information archive medium through the above-mentioned information acceptance means.

DETAILED DESCRIPTION

[Detailed Description of the Invention]
[0001]
[Field of the Invention] This invention relates to the download equipment and the download approach of realizing prevention of an illegal copy.
[0002]
[Description of the Prior Art] There is information on various kinds of data used or processed in data databases, such as a text which has data alphabetic characters, graphic forms, etc., such as a still picture displayed as data images, such as music

played as a program sound which a computer performs as software (software in the semantics of a wide sense) which can treat a computer and CPU, and voice, and an animation, and a drawing, etc.

[0003]

[Problem(s) to be Solved by the Invention] However, in the present condition, the illegal copy and unauthorized use of software are considerably performed focusing on the program which a computer executes.

[0004] Then, as the cure, in order to use software, the approach which needs a "key" is considered. For example, if the character string used as the "key" offered together with the software is not inputted when installing application software in a personal computer, there is an approach which can be made not to perform install of the software.

[0005] However, a "key" will be able to be easily known except the user of the normal of the software, and will be able to be used any number of times. Therefore, even if it calls it the illegal copy of software, and the cure of an unauthorized use, the place depended on a user's morals is large despite a join office.

[0006] Moreover, if the media which have a copyright protection feature are used, an illegal copy can be prevented, but this is not made even if it is going to copy and use for other media from which specification differs in this case, for example even if it is the user of normal.

[0007] This invention tends to solve the above troubles.

[0008]

[Means for Solving the Problem] It is the download approach which downloads the information currently prepared for the information offer means to the information archive medium set to the information acceptance means, for example, and when downloading the above-mentioned information to the above-mentioned information archive medium through the above-mentioned information acceptance means, in this invention, the data which permit use of the above-mentioned information archive medium carry out as the download approach which wrote in to the above-mentioned control media by the write-in predetermined means. Therefore, only when there are control media, the information on an information archive medium becomes available.

[0009]

[Embodiment of the Invention] Drawing 1 shows an example of this invention and is the case where a user purchases music using EMD (electronic music distribution service), in this example. Furthermore, in this example, while containing the purchased music to MD41, it is the case where the data of "a key and purchase information" are

contained to a memory card 42. That is, information is the case where the archive media of a user and information are [MD41 and control media] memory cards 42 for the claimant of music (music) and its information.

[0010] Here, the "key" of "a key and the purchase information" is data for being related with the music to purchase and protecting copyright, and is data for assuring that the user purchased the music and permitting the user of normal playback of music. Moreover, the service condition of music etc. is included in the "purchase information" of "a key and the purchase information", and the count of authorization of a copy, for example, limit information like "permitting a copy to 3 times", is contained in it.

[0011] And in drawing 1 , a sign 10 is MD player in which, as for an informational offer means and a sign 20, a user owns the personal computer with which a network owns the distribution equipment of music, and a sign 20, and a user owns a sign 30 for a sign 10 since an informational acceptance means and a sign 50 are informational use means and a user is the case where music is purchased using EMD in now, and a sign 50 for an informational distribution means and a sign 30.

[0012] In this case, although prepared for for example, a label firm, distribution equipment 10 has a communication circuit 12 and a computer 13 while having HDD11 as large capacity storage. And the digital audio data of many music (music) are saved as the one file per music at HDD11. Moreover, the data compression of that digital audio data is carried out with the predetermined data compression method, for example, ATRAC3 method, at this time.

[0013] Furthermore, a communication circuit 12 is for sending out the digital audio data saved at HDD11 to a personal computer 30 through a network 20. Moreover, a computer 13 is for controlling this distribution equipment 10 while outputting the data of "a key and purchase information." Furthermore, generally a network 20 contains the Internet, ISP, etc.

[0014] Moreover, a personal computer 30 has HDD32 as large capacity storage while having a communication circuit 31. In this case, a communication circuit 31 receives the data sent through a network 20 from distribution equipment 10. Moreover, HDD32 is for once saving the data received by the communication circuit 31.

[0015] Furthermore, a personal computer 30 has the MD recording device 33 and the memory card processor 34. In this case, the MD recording apparatus 33 is a thing record thru/or for writing in about the digital audio data once saved at HDD32 at MD41. Moreover, the memory card processor 34 is for performing writing and read-out of the data of "a key and purchase information" to a memory card 42.

[0016] Here, although the semiconductor memory of non-volatiles, such as a flash memory, is contained or enclosed with a predetermined case or a predetermined package, further, a memory card 42 has a function corresponding to protection of copyrights, and it is constituted so that the contents cannot be copied unjustly. In addition, there is for example, a Magic gate memory stick (trademark) as such a memory card 42.

[0017] Furthermore, a personal computer 30 has the body section 35 which performs various kinds of control and processings, the keyboard 36 for alter operation and a mouse 37, and a display 38. In this case, although the body section 35 does not carry out illustration, it has CPU for operating this personal computer 30 as a computer, RAM, etc.

[0018] Moreover, the MD player 50 has the MD regenerative apparatus 51 which reproduces MD41, the memory card reader (reader) 52, and the computer 53 for system controls. In addition, the playback output signals L and R of a regenerative apparatus 51 are supplied to Loudspeakers 54L and 54R.

[0019] In such a configuration, distribution of music is performed as follows. That is, when a user purchases music using a personal computer 30, the keyboard 36 or mouse 37 of a personal computer 30 is operated, and a personal computer 30 is connected to distribution equipment 10 through a network 20.

[0020] Then, predetermined data are transmitted to a personal computer 30 from distribution equipment 10, and the information for purchasing music, for example, a music name, an artist name, a price, etc. are displayed on a display 38. Then, a user operates a keyboard 36 or a mouse 37, chooses the target music, and determines purchase. Moreover, an approach to pay a tariff and its information required to pay are also inputted at this time. And actuation of a preparation completion is carried out after that.

[0021] Then, the digital audio data of the music which the user chose from HDD11 among the digital audio data of music saved at this are read, and this digital audio data is supplied to HDD32 through Rhine of the communication circuit 12 -> network 20 -> communication circuit 31, and is written in HDD32. Moreover, at this time, the data of "a key and purchase information" are outputted from a computer 13, and these data are similarly written in HDD32.

[0022] In this way, the digital audio data of the music which a user wishes, and the data of "a key and purchase information" download to HDD32. And after this download is completed, the communication link between a personal computer 30 and distribution equipment 10 is considered as termination, and connection is made off.

[0023] Then, while setting MD41 in the MD recording device 33 according to the display of a display 38, a memory card 42 is set in the memory card processor 34, and this thing [having set] is inputted with a keyboard 36 or a mouse 37. Then, the digital audio data of music downloaded to HDD32 are read from HDD32, are supplied to the MD recording device 33, and are recorded on MD41. In addition, at the time of this record, a high speed can be made to be able to rotate MD41 rather than a standard linear velocity, and chart lasting time can be shortened.

[0024] And after ending record of the digital audio data to MD41, the data of "the key and purchase information" which were downloaded to HDD32 are read from HDD32, are supplied to the memory card processor 34, and are written in a memory card 42. This writing is performed corresponding to the copyright protection feature of a memory card 42, and it prevents from copying the contents of the memory card 42 to other memory cards.

[0025] And if the data of "the key and purchase information" on HDD32 are written in a memory card 42, the data of "the key and purchase information" on HDD32 will be deleted. Therefore, it means that the data of "the key and purchase information" which were downloaded to HDD32 were moved to the memory card 42 from HDD32. In addition, the count of authorization of a copy is made into 3 times among "the keys and purchase information" in a memory card 42 at this time.

[0026] All processings at the time of the purchase of music are ended by the above, and MD41 and a memory card 42 are ejected from the MD recording apparatus 33 and the memory card processor 34, respectively (or it can eject now).

[0027] Then, if the memory card 42 in which the data of the MD41, and "a key and purchase information" that music was recorded were written is set to the MD regenerative apparatus 51 and the memory card reader 52 of the MD player 50, respectively and playback is operated, the data of the "key" of "the keys and purchase information" on a memory card 42 will be checked by computer 53.

[0028] And when the data of a memory card 42 are data of the "key" of normal as a result of this check, playback of the music recorded on MD41 is permitted, and playback is started with a regenerative apparatus 51. Moreover, when the data of a memory card 42 are not data of the "key" of normal as a result of a check, playback of the music recorded on MD41 is made into disapproval, and playback is not started.

[0029] When writing the digital audio data of music downloaded to HDD32 in media with another MD41, for example, MD of the 2nd sheet, while setting a memory card 42 in the memory card processor 34 on the other hand, MD of the 2nd sheet is set in the MD recording device 33. And writing is operated with a keyboard 36 or a mouse 37.

[0030] Then, the data of the "key" of "the keys and purchase information" on a memory card 42 are checked by the body section 35, and when the data of a memory card 42 are data of the "key" of normal as a result of this check, the data of the "purchase information" of "the keys and purchase information" on a memory card 42 are checked further. And if the remainder of the count of authorization of a copy is not 0 times among this "purchase information", the digital audio data of music downloaded to HDD32 are read from HDD32, are supplied to the MD recording device 33, and are recorded on MD of the 2nd sheet.

[0031] And termination of record to this MD changes "the key and purchase information" on the memory card 42 set in the memory card processor 34. For example, the count will be changed into 2 times if the count of authorization of a copy is 3 times. The writing of the music to MD of the 2nd sheet is ended, and MD and the memory card 42 of the 2nd sheet are ejected from the MD recording apparatus 33 and the memory card processor 34 by the above, respectively.

[0032] In addition, when the data of the "key" of "the keys and purchase information" on a memory card 42 are checked by the body section 35 and this is not the "key" of normal, and when the remainder of the count of authorization of a copy is 0 times among "the keys and purchase information" on a memory card 42, let record to MD of the 2nd sheet be disapproval.

[0033] In this way, since a copy shall not be made by the memory card 42 on which "a key and purchase information" are recorded while making separate MD41 on which music is recorded, and the memory card 42 on which "a key and purchase information" are recorded according to the above-mentioned system, even if it copies the music of MD41 or HDD32 illegally, it cannot reproduce. Moreover, if the memory card 42 of normal is used no matter it may copy music to what media, the copied music is normally reproducible.

[0034] In addition, "a key and purchase information" can be written in a memory card 42 for every [the] music about two or more music. Moreover, in ****, although it is the case where music is purchased using a user's personal computer 30, when purchasing music using DCT (terminal) currently installed in the convenience store etc., it can constitute similarly.

[0035] Furthermore, in ****, although it is the case where "a key and purchase information" are written in a memory card 42, as long as it is the media which prevented from copying the contents of record, you may be other media. Furthermore, the media which record the digital audio data of music are also arbitrary. Moreover, the software to record is not restricted to the digital audio data of music, either.

[0036] [A list of the abbreviations currently used on these specifications]
ATRAC3:Adaptive-TRansform-Acoustic-Coding 3 (Trade Mark)CPU :Central-Processing UnitDCT :Digital-Contents-TerminalEMD :Electronic-Music-DistributionHDD :Hard-Disk-DriveISP :Internet Service ProviderMD :Mini DiscRAM : Random Access Memory convenience store : convenience store [0037]

[Effect of the Invention] According to this invention, it cannot be used even if it copies software illegally. Moreover, if the media of the normal in which "a key and purchase information" are written are used no matter it may copy software to what media, the copied software can be used normally.

DESCRIPTION OF DRAWINGS

[Brief Description of the Drawings]

[Drawing 1] It is the schematic diagram showing one gestalt of this invention.

[Description of Notations]

10 -- distribution equipment, 11 --HDD, 12 -- communication circuit, and 13 -- a computer, 20 -- network, 30 -- personal computer, and 31 -- a communication circuit, 32 --HDD, a 33 --MD recording apparatus, and 34 -- a memory card processor, 35 -- body section, 36 -- keyboard, and 37 -- a mouse, 38 -- display, 41 --MD, and 42 -- a memory card, a 50 --MD player, a 51 --MD regenerative apparatus, and 52 -- -- a memory card reader, 53 -- computer, 54L, and 54R-- loudspeaker